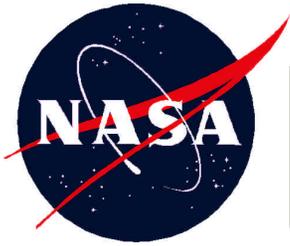


## KSC Spaceport Services Safety, Occupational Health, and Environment Division





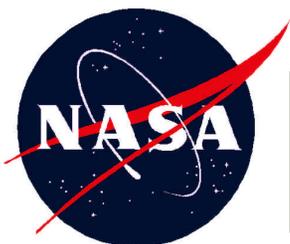
**KSC Spaceport Services  
Safety, Occupational Health, and Environment Division**

# **Institutional Safety and Quality Incidents & New Initiatives**

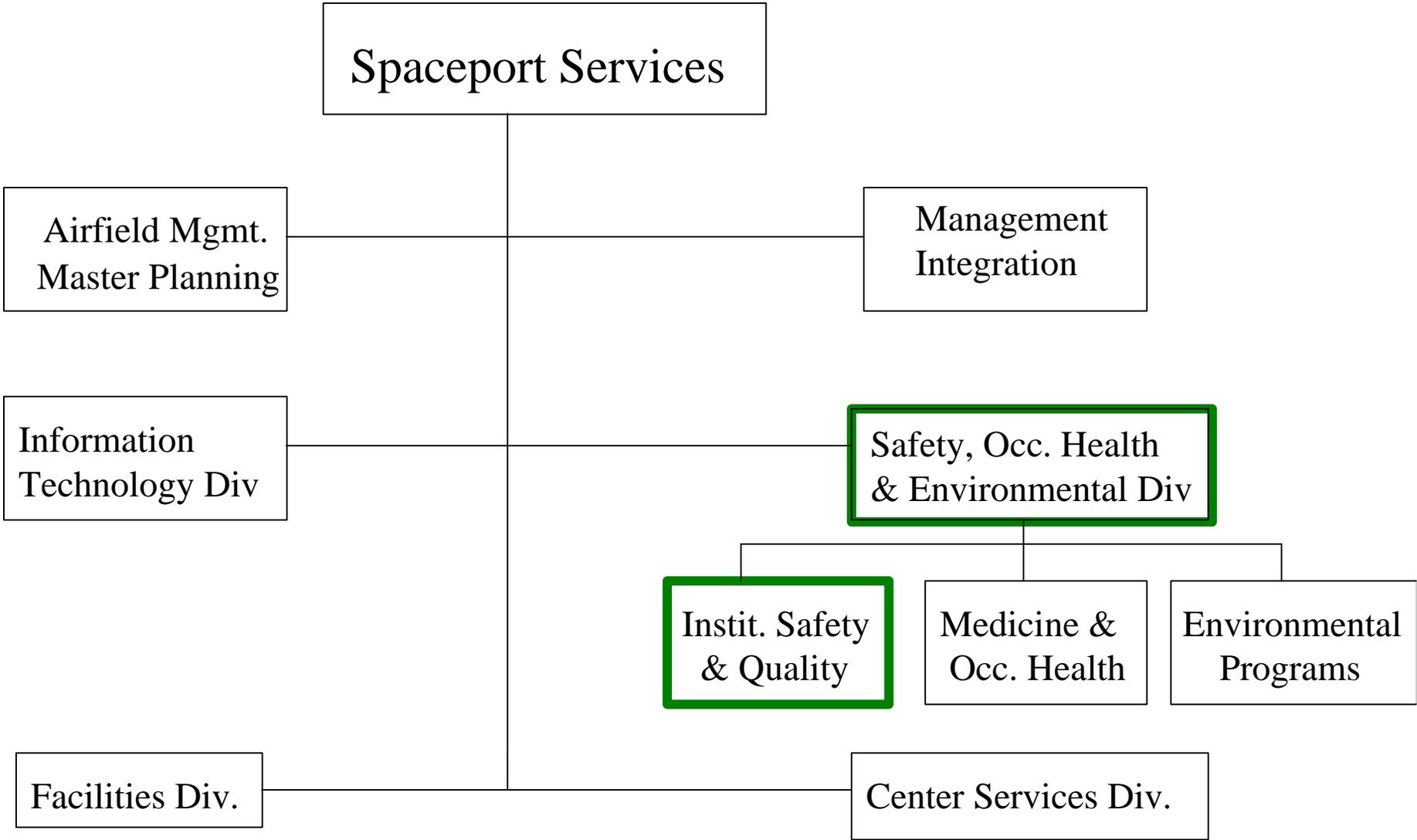
**NASA Safety Managers Meeting**

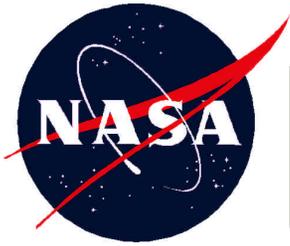
**3/20/2001**





# KSC Spaceport Services Safety, Occupational Health, and Environment Division



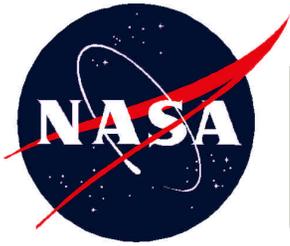


**KSC Spaceport Services  
Safety, Occupational Health, and Environment Division**

**Institutional Safety and Quality Branch – Resources**

**14 FTE Civil Service**

<b>Pressure Vessel/System Certification</b>	<b>2 FTE</b>
<b>Explosives Safety Program Management</b>	<b>1 FTE</b>
<b>Facility Assurance/System Safety</b>	<b>3 FTE</b>
<b>Occupational Safety Specialists</b>	<b>3 FTE</b>
<b>VPP Program Lead</b>	<b>1 FTE</b>
<b>Database Management</b>	<b>2 FTE</b>
<b>Propellant Contracts Quality Assurance</b>	<b>1 FTE</b>
<b>Branch Management</b>	<b>1 FTE</b>



**KSC Spaceport Services  
Safety, Occupational Health, and Environment Division**

**KSC Reorganization May 2000 - Benefits:**

S/H/E under one organization at KSC

Synergy between Divisions within the Directorate

Facilities

Logistics

Security/Fire/EP

Information Technology

Airfield Mgmt.

Master Planning

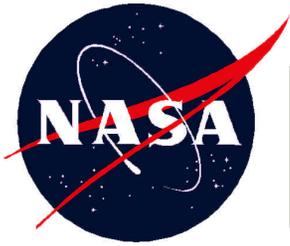
POC for safety on all institutional contracts

Base Ops Contract

Park Services

Food Services

Gov. Construction



**KSC Spaceport Services  
Safety, Occupational Health, and Environment Division**

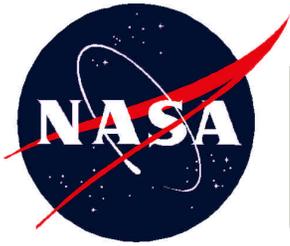
**KSC Reorganization May 2000 - Issues in work**

Communications between 6 different S&MA Offices

Finalize the selection of the best home for each piece of the safety program

Finalize distribution of contract safety insight responsibility

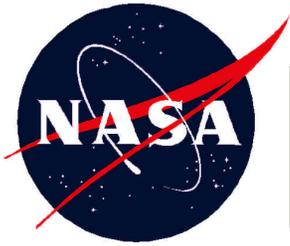
Re-write to large block of safety policy, procedures and guidelines to reflect current organization



**KSC Spaceport Services  
Safety, Occupational Health, and Environment Division**

**VPP Program Status**

Optimistic application date	April 1, 2002
Formal kick-off for NASA VPP	December 15, 2000
Formed teams for each VPP element	January 17, 2001
VPP Leadership team (NASA & Contr.)	Twice/month
OSHA on-site fact finding for USA and SGS applications	February 2001



**KSC Spaceport Services  
Safety, Occupational Health, and Environment Division**

**Other Significant Areas of Emphasis in Institutional Safety**

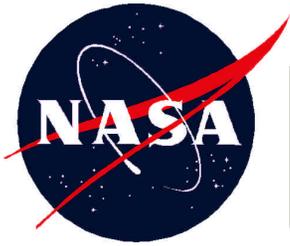
Facility Assurance process definition for JBOSC

Public event safety (including 20,000 visitors per launch)

Variance Processing Automation/Database

Explosives Safety Committee including contractors

PEP re-survey May 2001



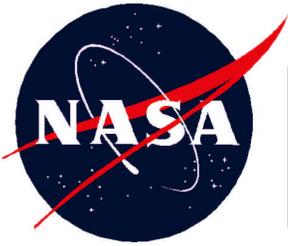
**KSC Spaceport Services  
Safety, Occupational Health, and Environment Division**

**Other Significant Areas of Emphasis in Institutional Safety**

Facility inspection program upgrade

Safety Concerns and Reporting System (MSFC)

Training needs assessment/survey (Ames)



**KSC Spaceport Services  
Safety, Occupational Health, and Environment Division**

**Areas Where Code QS Assistance may be Feasible**

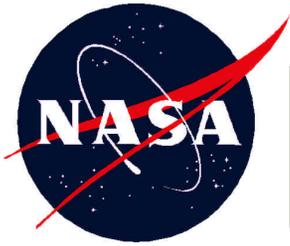
**Web Base IRIS**

38 system users at KSC = extensive care and feeding  
Maximize Ease of Use = better/more comprehensive use

**QD Sitting Program**

Automate the updating process with addition of new  
programs

**Mishap Report Distribution/Database**



**KSC Spaceport Services  
Safety, Occupational Health, and Environment Division**

**Areas Where Code QS Assistance may be Feasible**

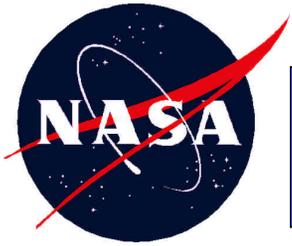
**Repository/web for Center Program Information**

**Facilitation of Program Specific Discussions (similar to Lifting Devices, fire protection and emergency preparedness)**

VPP status and approach

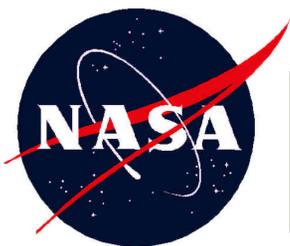
Performance based contract insight

**Help to place the right perspective on the injury/illness data presented to Senior Management**



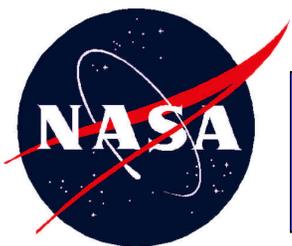
**KSC Spaceport Services  
Safety, Occupational Health, and Environment Division**

**Safety Incidents/Mishaps at KSC  
FY 00 and 01**



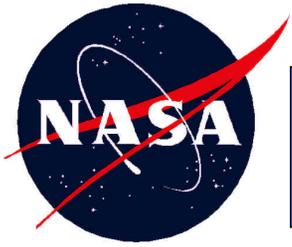
## KSC Spaceport Services Safety, Occupational Health, and Environment Division





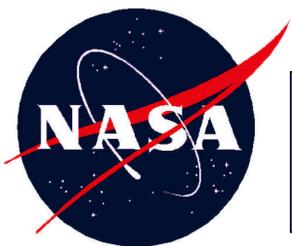
# KSC Spaceport Services Safety, Occupational Health, and Environment Division





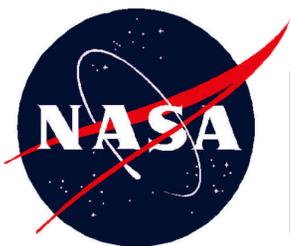
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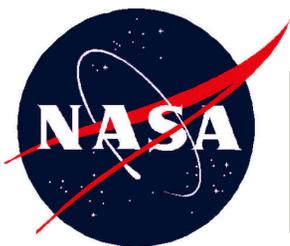
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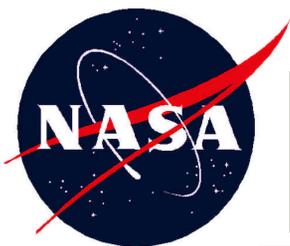
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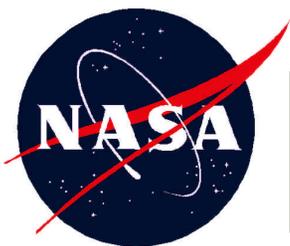
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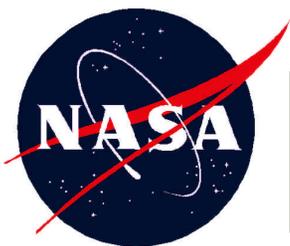
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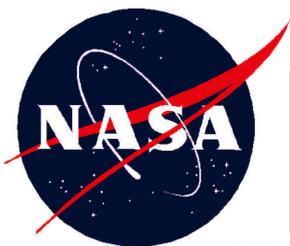
## KSC Spaceport Services Safety, Occupational Health, and Environment Division





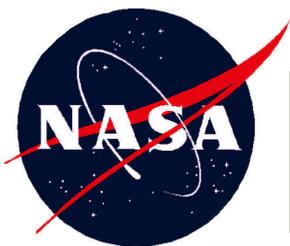
## KSC Spaceport Services Safety, Occupational Health, and Environment Division





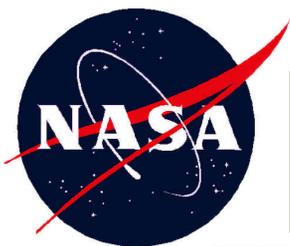
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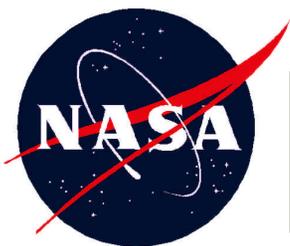
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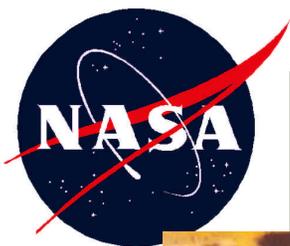
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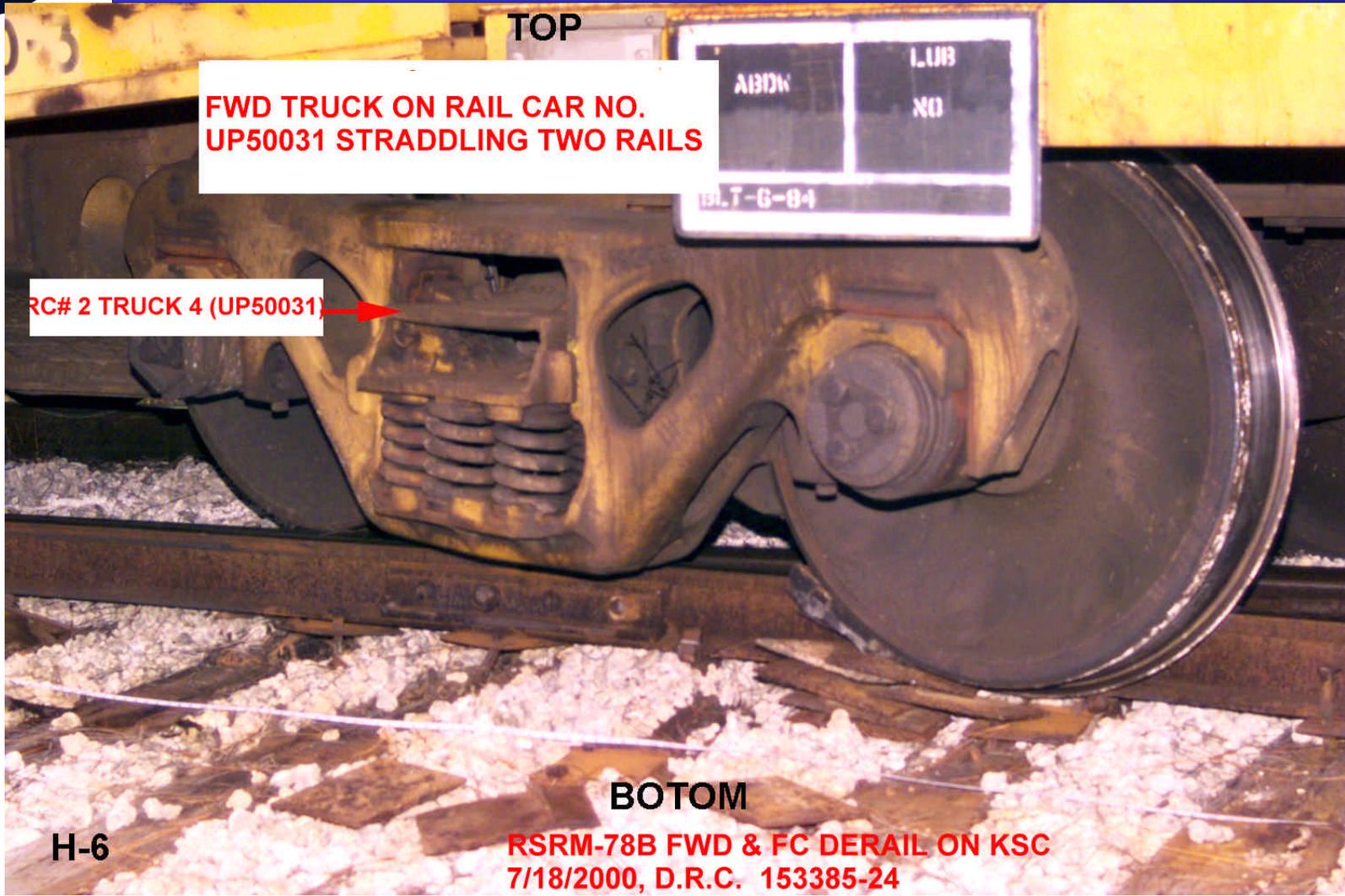


## KSC Spaceport Services Safety, Occupational Health, and Environment Division



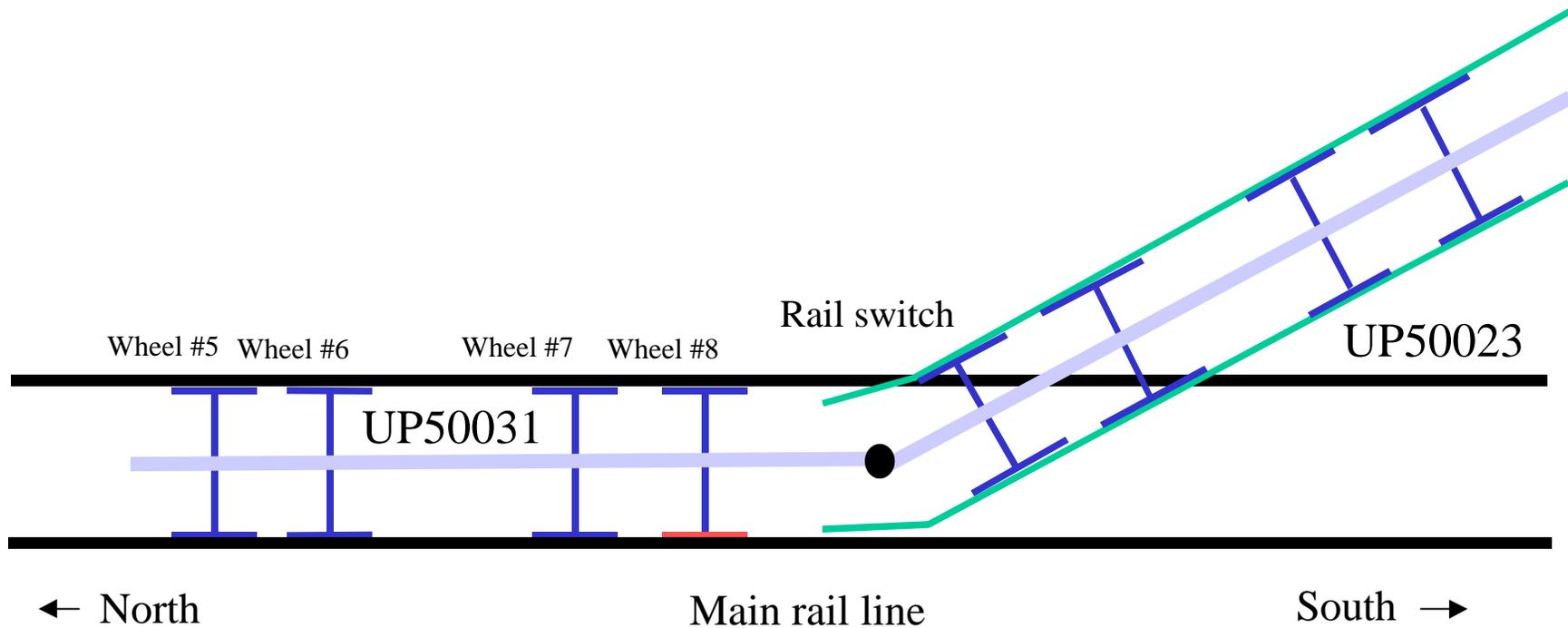


# KSC Spaceport Services Safety, Occupational Health, and Environment Division



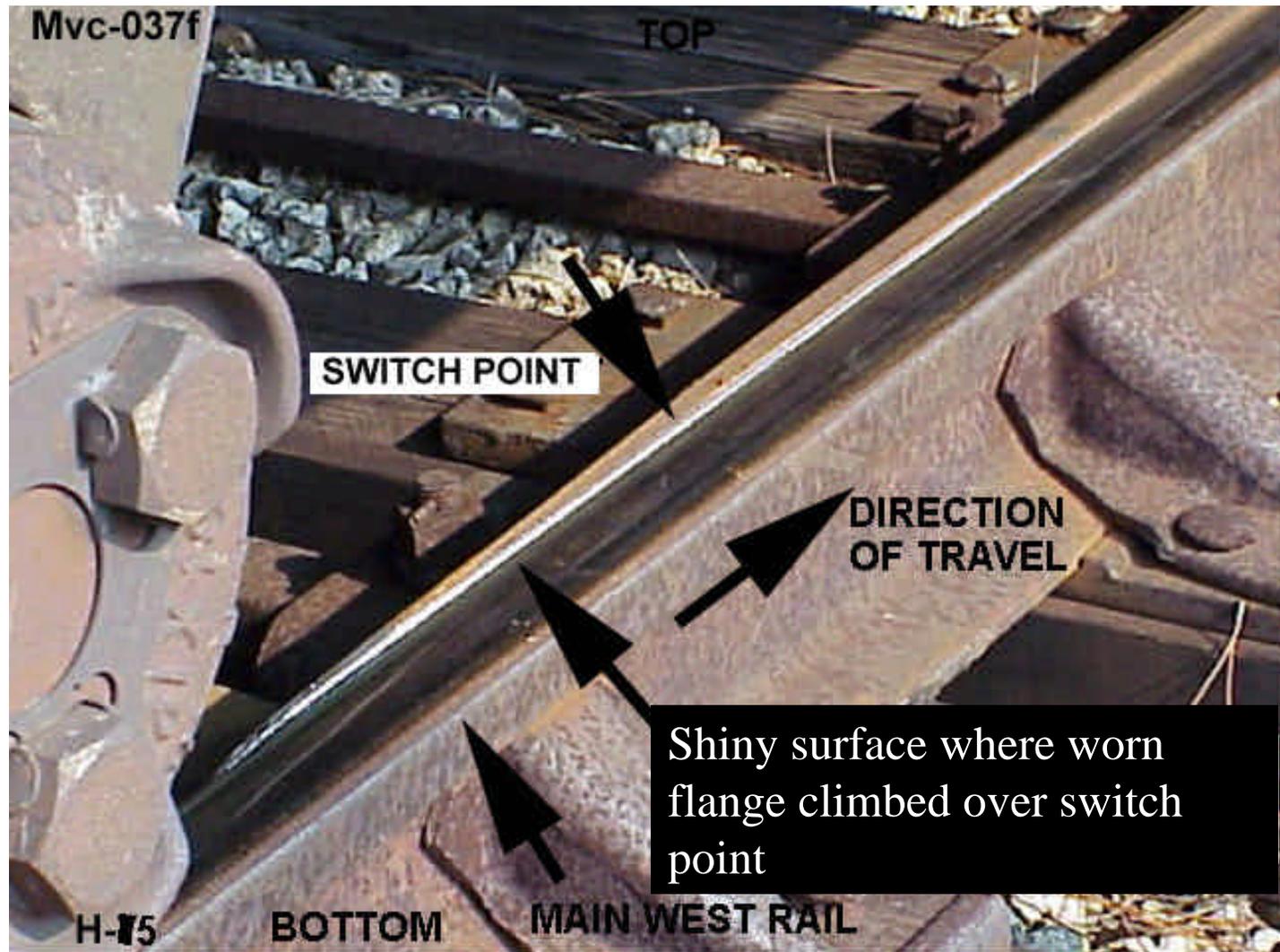
# RSRM-78 Incident    Discovery of Derailment

First two cars passed through rail switch



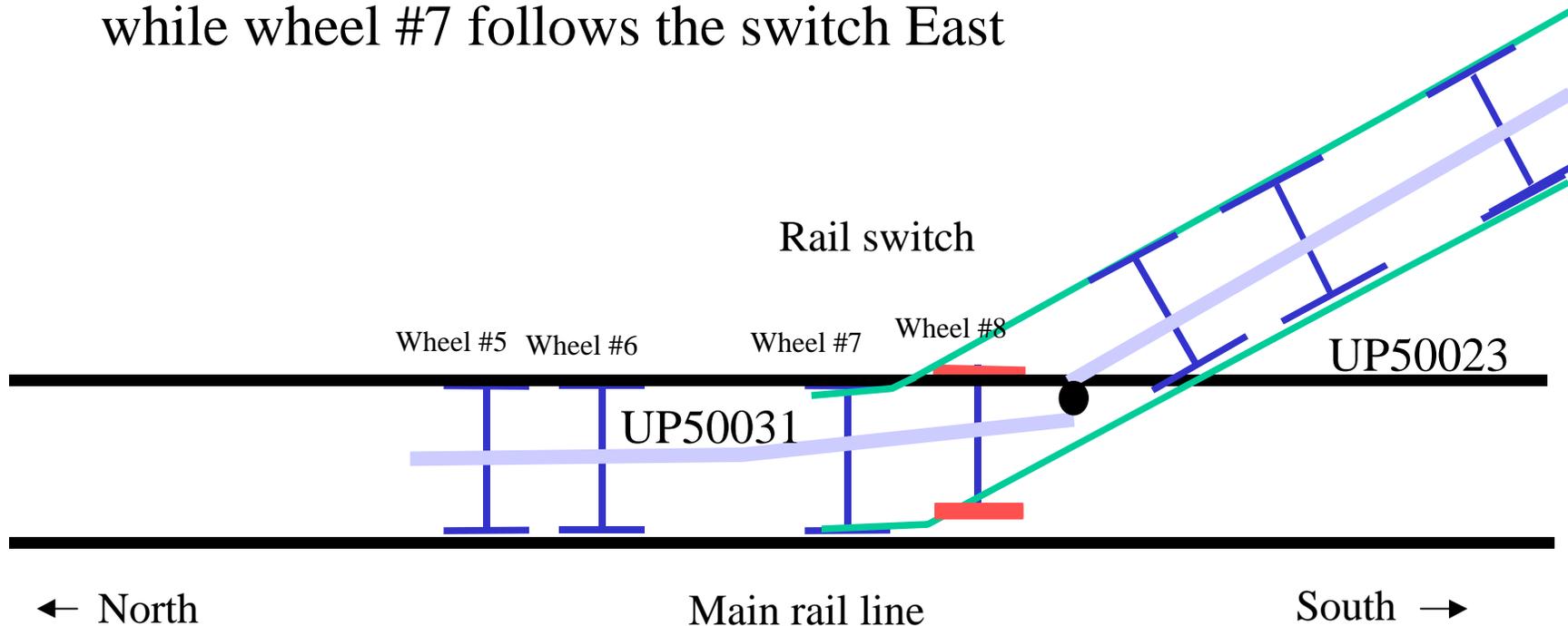
Rail Road siding South of Roberts Road Siding

# RSRM-78 Incident    Discovery of Derailment



# RSRM-78 Incident    Discovery of Derailment

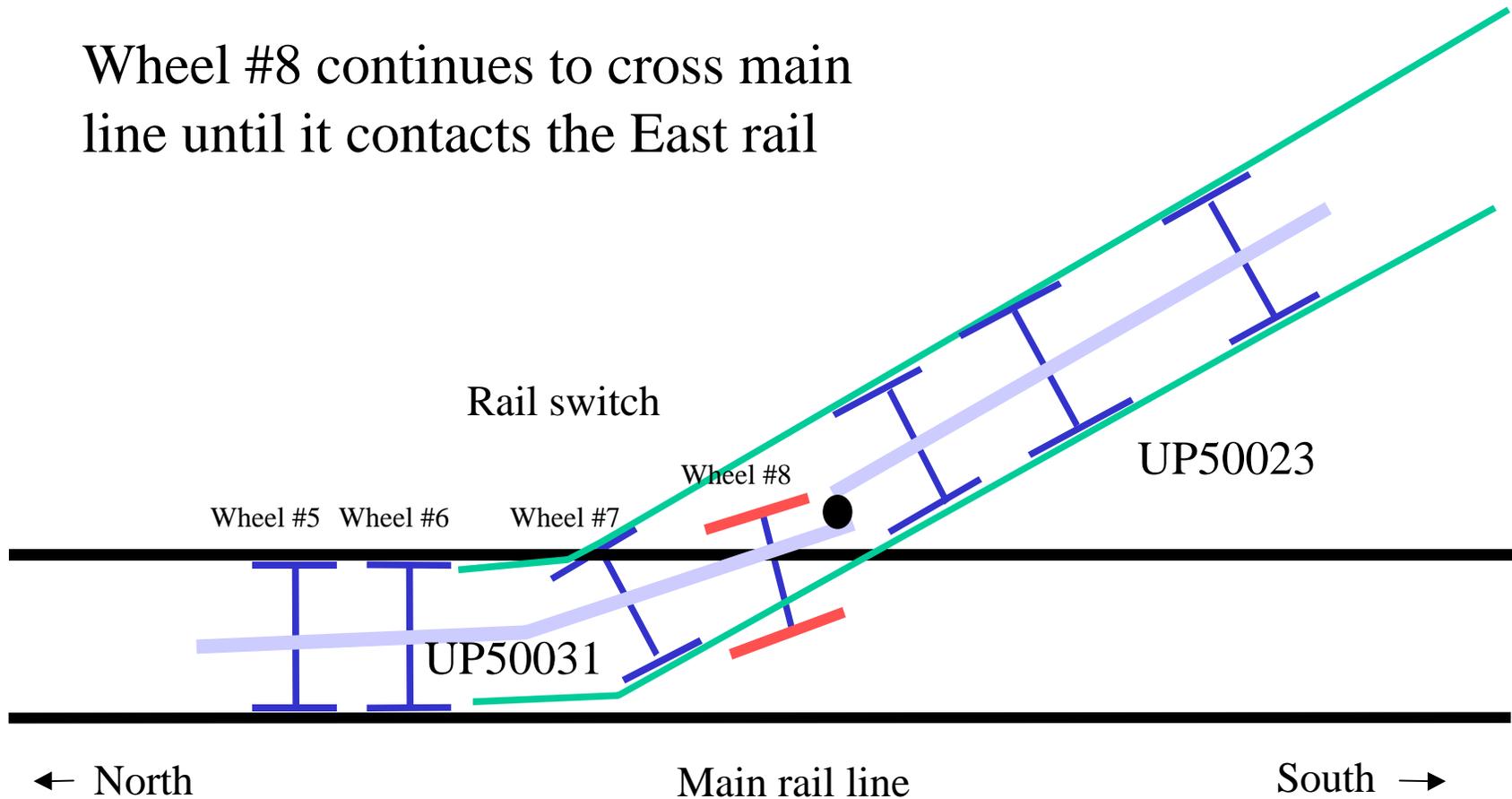
Wheel #8 continues South on main line  
while wheel #7 follows the switch East



Rail Road siding South of Roberts Road Siding

# RSRM-78 Incident Discovery of Derailment

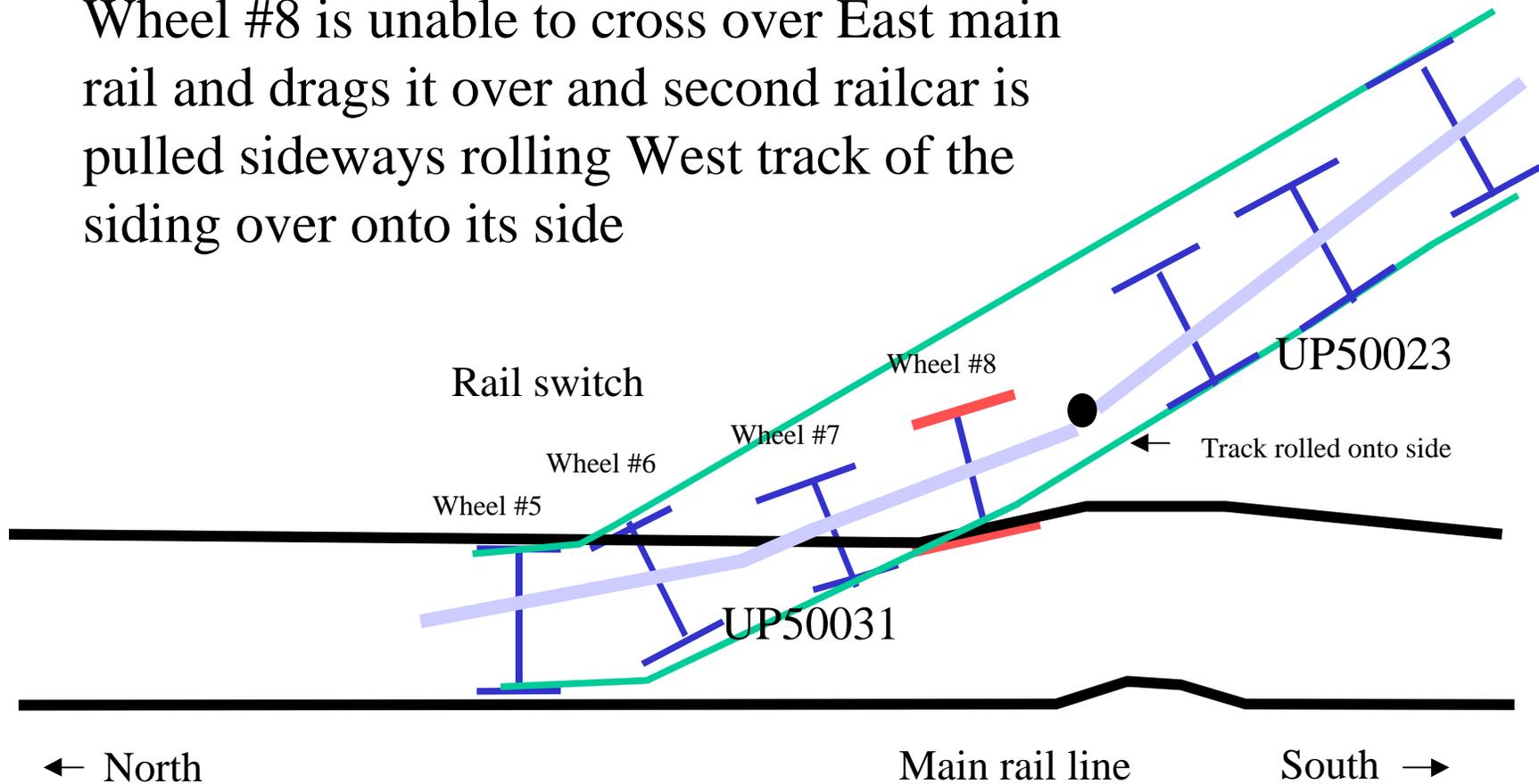
Wheel #8 continues to cross main line until it contacts the East rail



Rail Road siding South of Roberts Road Siding

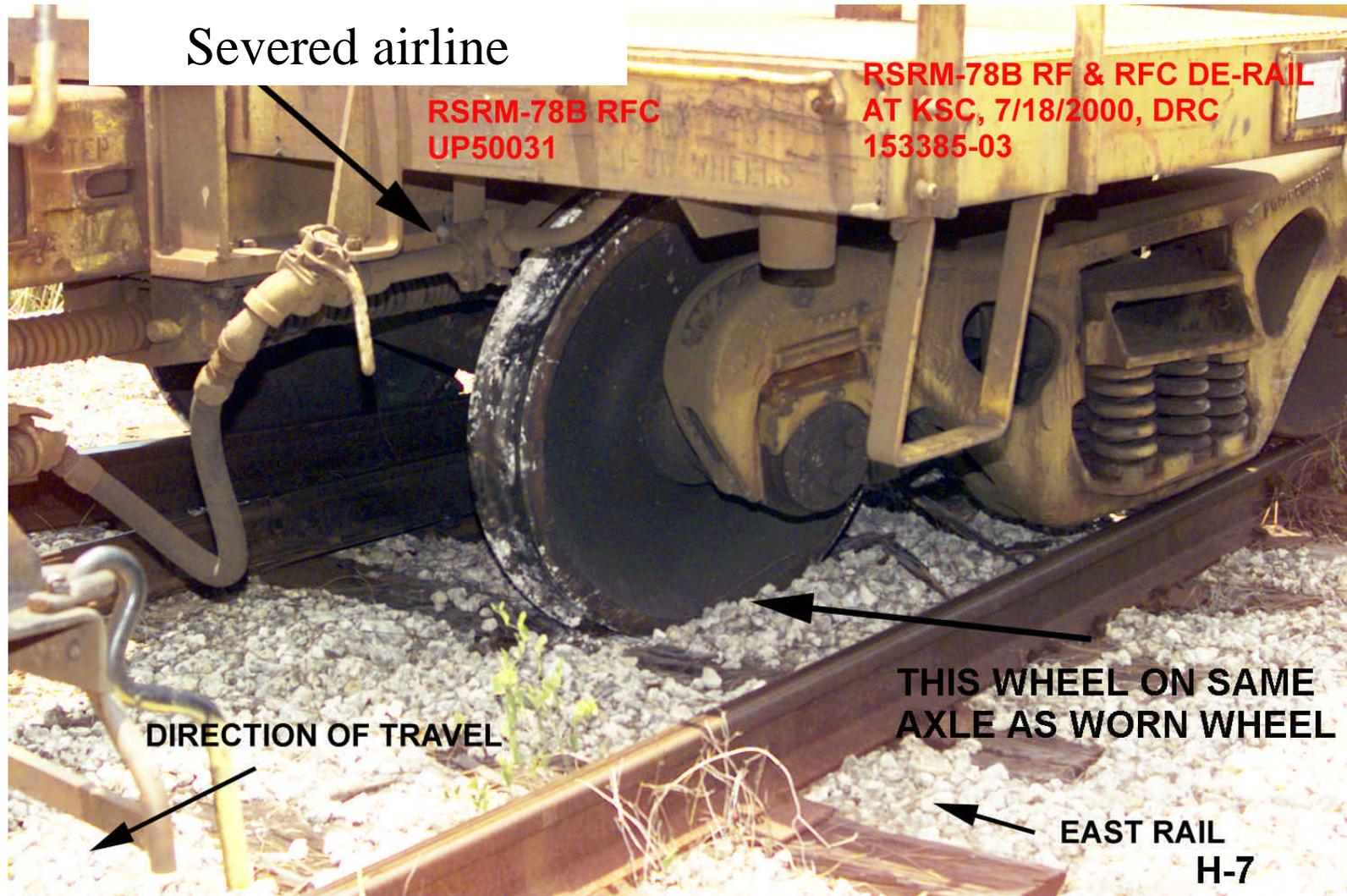
# RSRM-78 Incident    Discovery of Derailment

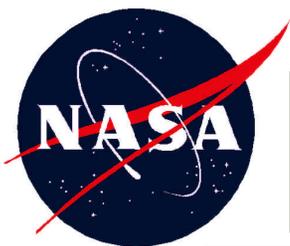
Wheel #8 is unable to cross over East main rail and drags it over and second railcar is pulled sideways rolling West track of the siding over onto its side



Rail Road siding South of Roberts Road Siding

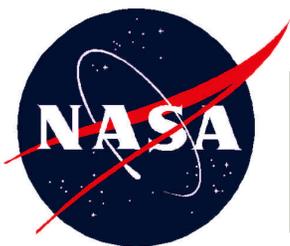
# RSRM-78 Incident      Discovery of Derailment





# KSC Spaceport Services Safety, Occupational Health, and Environment Division





# KSC Spaceport Services Safety, Occupational Health, and Environment Division



MANITOWOC ENGINEERING CO

A division of The Manitowoc Company, Inc.

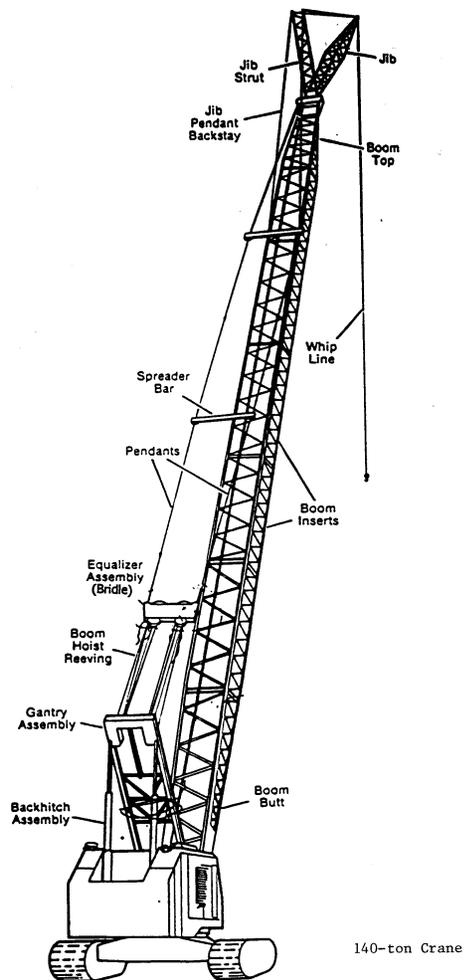
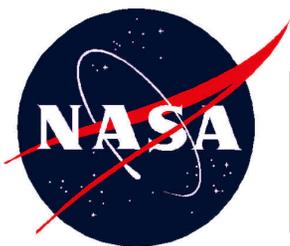
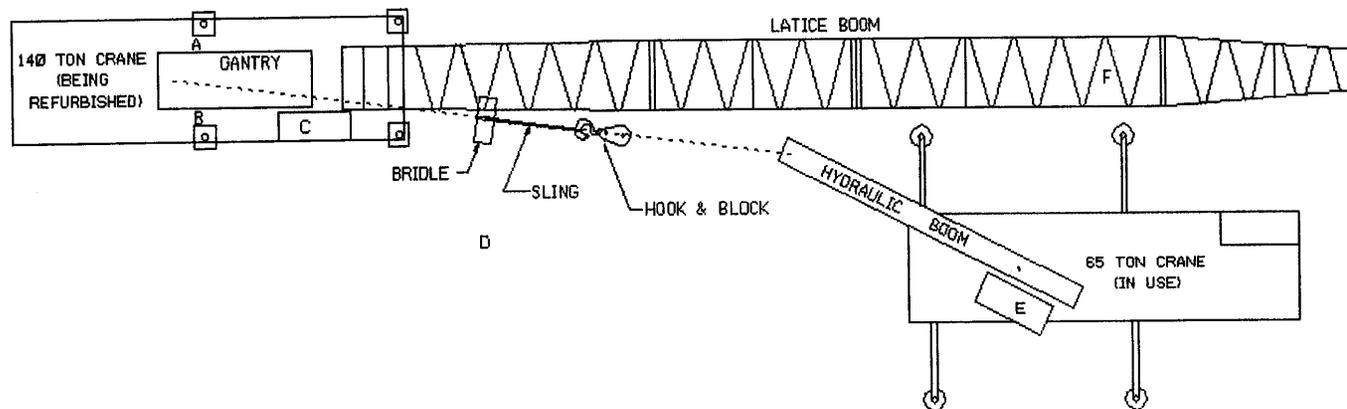


FIGURE 1 BOOM COMPONENT IDENTIFICATION  
D-1



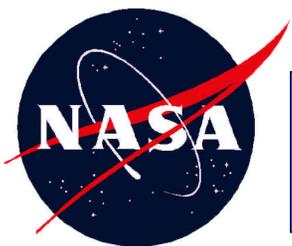
# KSC Spaceport Services Safety, Occupational Health, and Environment Division



D-2

- A = RINGHAVER MECHANIC
- B = RINGHAVER MECHANIC
- C = SGS CRANE OPERATOR
- D = SGS FLAGMAN
- E = SGS CRANE OPERATOR
- F = RINGHAVER WELDER

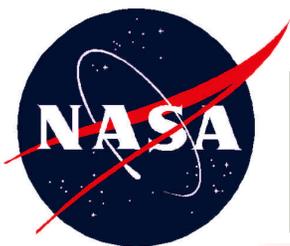
Diagram of Mishap Scene



## KSC Spaceport Services Safety, Occupational Health, and Environment Division



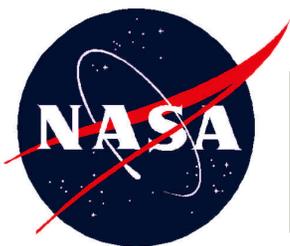
140-ton & 65-ton crane positioning



## KSC Spaceport Services Safety, Occupational Health, and Environment Division



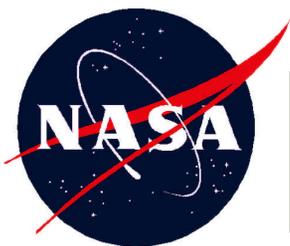
Re-enacted choker sling configuration on bridge



## KSC Spaceport Services Safety, Occupational Health, and Environment Division



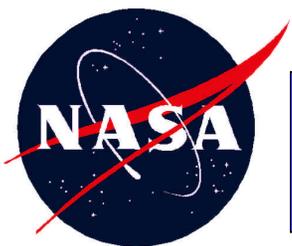
Failure area of sling



## KSC Spaceport Services Safety, Occupational Health, and Environment Division

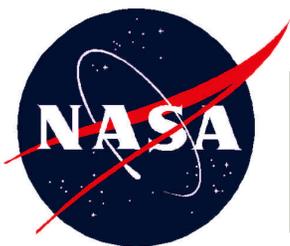


Damaged jib of 65-ton crane



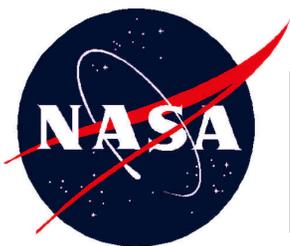
## KSC Spaceport Services Safety, Occupational Health, and Environment Division



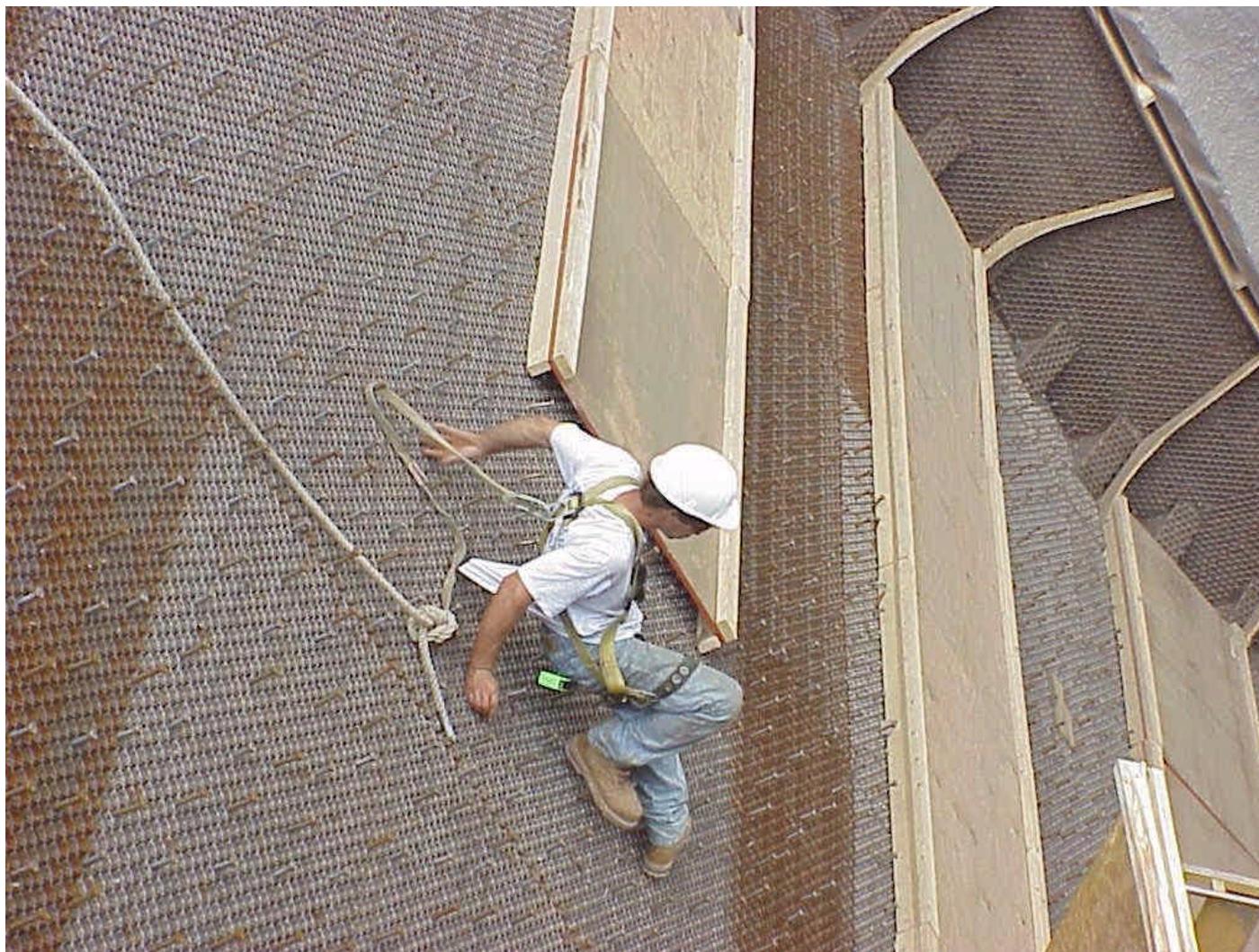


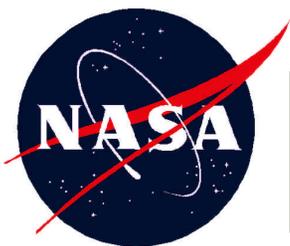
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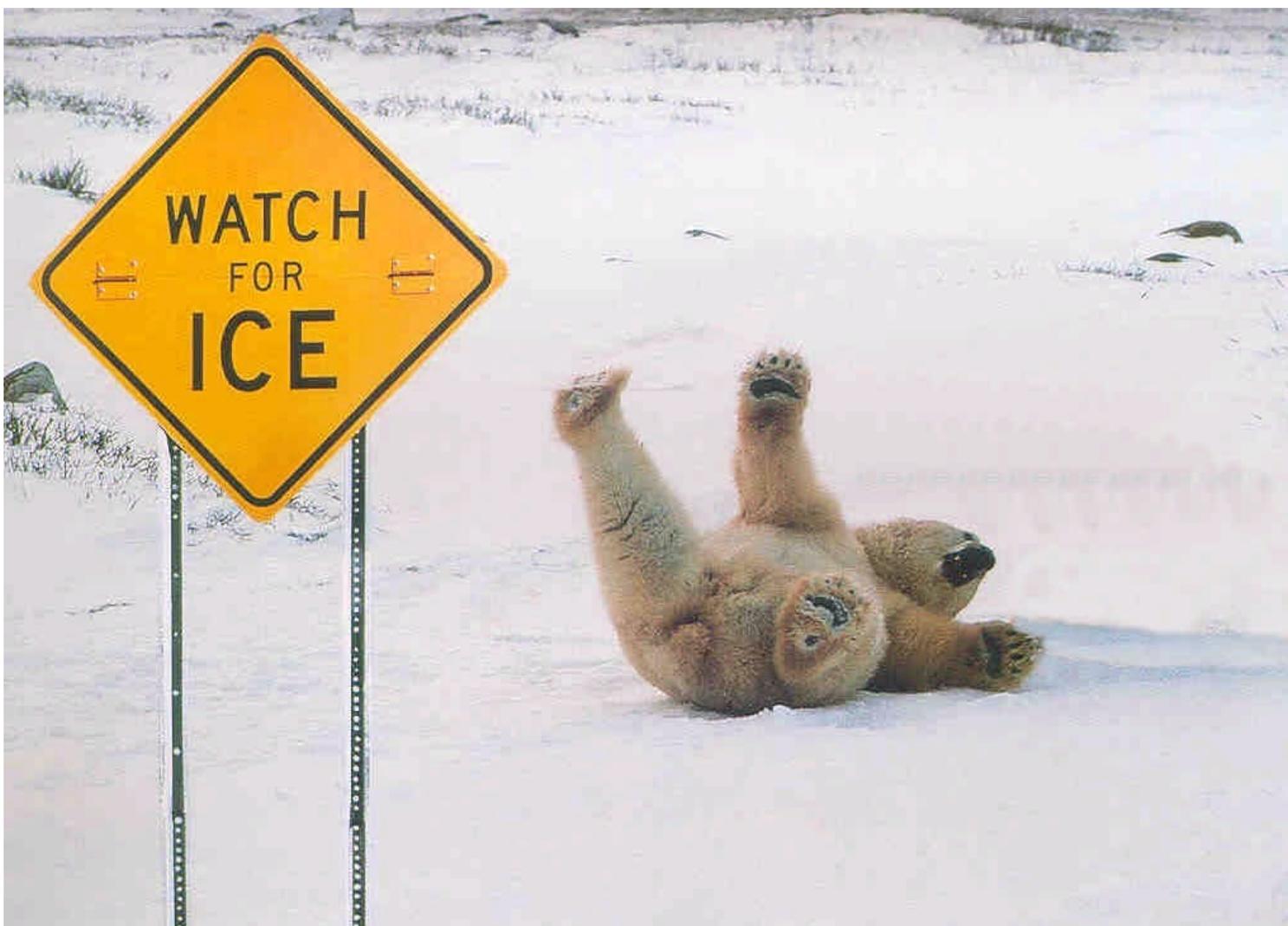


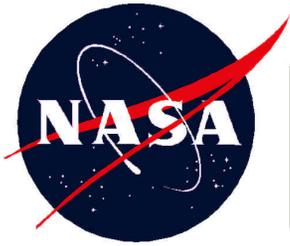
## KSC Spaceport Services Safety, Occupational Health, and Environment Division





**KSC Spaceport Services  
Safety, Occupational Health, and Environment Division**





**KSC Spaceport Services  
Safety, Occupational Health, and Environment Division**

## KSC Lost Time Injury Experience

FY 00

5 Lost time injuries

2 slips on tiled hallway (no obstacles)

1 trip over parking lot bumper

1 trip over cardboard box

1 strain (hernia) from moving box of books

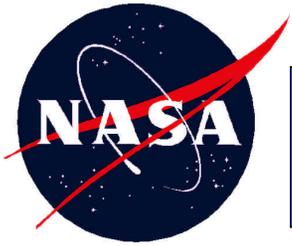
FY 01

3 Lost time injuries

1 paper cut to the eye

1 hip bruise on cafeteria counter

1 slip on tiled hallway (water spill)



**KSC Spaceport Services  
Safety, Occupational Health, and Environment Division**

## Safety Talks

ON-line source of safety program information has been renewed for all NASA Centers

FY 01 renewal included extending the program to NASA Contractors